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Address to the Medical Society of Nova Scotia

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I AM honoured in the invitation of this Society to address you.

In the Province of Ontario, from which I come, and in the more westerly parts of Canada, we are accustomed to look upon the Maritime Provinces as the sources of our intellectual springs, inasmuch as from you come most of our University Presidents, statesmen and great preachers. With this in view it is an added honour to have such an invitation.

The progress of medicine is one to be proud of and in modern times there is nothing perhaps to be compared with it, unless it be the coincident progress of preventive medicine, commonly called public health, or, in other words, the prevention of disease. Curative medicine and preventive medicine are so closely allied and interwoven the one with the other, that it is impossible completely to separate them. For example, diphtheria antitoxin acts both as a curative means and a means of prevention. The same is true of salvarsan, one of the remedies for syphilis, of antitoxin for the prevention of lockjaw, and many others.

A description of the progress of medicine is well illustrated by the work of this and kindred societies all over the world, and is in more competent hands than mine. Therefore I propose this evening to devote my remarks to the subject of Public Health or the Preventive side of Medicine.

Public Health Progress, or, in other words, the prevention of disease, is from the days of Edward Jenner's discovery of the prevention of smallpox, not only an alluring and romantic subject, but one of the utmost importance to the welfare, comfort and happiness of the human race.

Edward Jenner, the son of an English clergyman, was born in 1749. He took up the study of medicine and spent the greater part of his life as a general practitioner—one of the most illustrious who has ever

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adorned the ranks of medicine—in the country town of Berkeley. His discovery of vaccination against smallpox had its inception in a chance remark which, at the age of 13 years, he heard while serving his apprenticeship, as was the custom in those times, with the Ludlows of Sodbury. A young countrywoman came to the surgery to seek advice; the subject of smallpox was mentioned in her presence; she immediately observed, "I cannot take that disease for I have had cowpox." The incident remained in his mind and was put into practical application in 1796, when he tested the effect of inoculation with cowpox against smallpox and found that the milkmaid's remark was a true one. Such was the beginning of vaccination. Until this time, 1797, when Jenner's discovery was given to the world an attack of the disease itself was the only means of acquiring protection against smallpox. The price paid for this immunity was death, or horrid disfigurement, blindness and subsequent ill-health amongst those (including nearly everyone) who contracted the disease. Smallpox in those days was commoner than measles at the present time. It killed one out of every four of those whom it attacked. Inoculation changed it into a disease by which only one out of several hundred perished, consequently the beneficent effect of Jenner's discovery was then appreciated in a manner which a sure preventive of tuberculosis or cancer or old age would be received in the present day. True to the traditions of the medical profession, Jenner gave the results of his observations unreservedly to the profession and the public, and in the course of ten years it received almost universal recognition, spreading with amazing rapidity. In Sir Walter Scott's "Heart of Midlothian" referring to the meeting of Jeannie Deams and Queen Caroline, the author says: "The lady who seemed the principal person had remarkably good features though somewhat injured by the smallpox, that venomous scourge which each village Esculapius (doctor) (thanks to Jenner) can now tame as easily as their tutelary deity subdued the python." A public petition pointing out that Jenner had given his discovery free to the public was presented to the British Parliament in 1802 and secured him a grant of £10,000 to which was added one of £20,000 in 1807. The Chairman of the House Committee stated during the course of the debate in 1802 that 40,000 lives per annum had been saved in the United Kingdom alone as the result of Jenner's discovery. Untold lives have been saved in the last century by reason of his wonderful achievement, and to-day, with improved methods of vaccination, smallpox is the easiest of all communicable diseases to control.

Modern public health is a little over two generations old, and it was only at the end of last year that the scientific world celebrated the centenary of its founder, Louis Pasteur. Pasteur, the son of a tanner,

was born in the little village of Dolé in France. His father, who had been a soldier of Napoleon, was one of a succession of generations in the trade of tanner. He was a quiet, reserved man; the mother, the daughter of a market gardener, was alert and full of enthusiasm, who, doubtless, transmitted her latent genius to her distinguished son. The early training of Pasteur was in chemistry and in this branch of science he expected to devote himself. In his formal proposal of marriage he said: "I have no private income; all that I possess is good health, good principles and my position in the University. I shall devote myself to researches in chemistry. My ambition is to go back to Paris when my scientific work shall have given me a reputation." In the wife, Marie Laurent, who married him on this prospect in life, Pasteur secured a helpmate who was of the highest assistance to his future career.

After making important advances in chemistry, Pasteur made researches into the causes of fermentation, decomposition, and putrefaction, and discovered that these processes are due to *living germs. This discovery forms the basis of the science of bacteriology and is the foundation of all scientific public health work.* Pasteur's remarkable achievement was born not by accident but as the result of years (1857-1864) of the most slave-like endurance, study and experimentation. It proved that which future years have confirmed that "La vie c'est le germs et le germs c'est la vie" (the life of the germ is the germ of life).

Incidentally there lived during this period the most notable surgeon of his time, Sir Jos. Lister, whose adaptation of the principles of Pasteur's discovery have revolutionized surgery and obstetrical practice. By the use of antiseptic and aseptic methods in surgery, operations hitherto impossible have become daily events and surgical practice has become almost as perfect as the hands of man could make it. The saving of life by this means has been of incalculable value to humanity. As Lister said of Pasteur in 1884: "Truly there does not exist in the whole world an individual to whom Medical Science owes more than to you."

The industrial life of France fifty years ago depended largely upon the silk industry and the wine industry. Both of these were seriously threatened with destruction, the one from an intractable disease of the silk-worms and the other from disease of grapes. In addition, the production of beer, the raising of cattle, fowl and sheep were similarly endangered by disease. Pasteur conquered all these maladies and once more established industrial France in a position which even repeated disastrous wars have failed to destroy. When nearly sixty years of age Pasteur began the study of rabies or hydrophobia, and step by step developed a means of prevention which is the standard one to-day, and which has caused an almost complete disappearance of this affection.

An estimate of the value of the work of Pasteur is beyond one's comprehension. How great is enhanced the wealth of all civilized countries by his discoveries is uncountable, how much suffering has been prevented, how many lives have been saved one can only surmise, they are numbered by the millions. Pasteur sought no reward. He was content with his work, joyful in that he had done something to help humanity. In every land, in each succeeding generation, his influence will be felt. His name is imperishable!

Tuberculosis

Tuberculosis is an infectious disease.

Those ill of tuberculosis infect the well, particularly young children. Practically speaking there is no tuberculosis among infants until they begin to creep about the floor and put their dirty fingers in their mouths, thus conveying infection to themselves. The means of prevention of tuberculosis are simply *by cutting off the sources of infection.* This and the discovery of the germ causing disease by Koch in 1882 have had an enormous effect in reducing the mortality from tuberculosis. Indeed within the memory of the present generation the death-rate has been cut in half.

Diphtheria

If one thinks of the terrors which diphtheria had for the mother of a family as short a time as 25 years ago, when the death-rate was one of every two cases of the disease, one is filled with gratitude to the discoverer of diphtheria antitoxin which has brought the death-rate down to about one in every hundred cases, and which would, if used early enough, prevent death in every case of the disease. On a tombstone in the old military cemetery in the city of Halifax there is an inscription recording the death, in the year 1826, of two little children. They died within a few days of each other, the cause being set down as "synechia maligna" and this is followed by the question, "Was it disease or the ignorance of the doctors that caused the loss of these young lives?" The same reproach would be unlikely in these days. The present name of the disease referred to is diphtheria whose nature, cause and proper treatment were unknown until about a generation ago.

Cholera, Plague and Typhoid Fever

In cholera, the plague and typhoid fever the causes and means of transmission have been discovered and these diseases, which formerly decimated cities and armies, are readily controlled. Cholera and typhoid are due to the pollution of food and drink by the excreta of mankind. In the South African War of 25 years ago, more men died of typhoid fever than from all other causes combined. As inoculation against typhoid

became perfected the protection of armies against this disease increased and in 1912 of some 20,000 soldiers in India the incidence rate among the inoculated was 5.39 per 1000 and among those not inoculated 30.4 or six times as great. Finally, in the Great War the incidence of and the mortality from typhoid fever in all the British armies was trifling, because of the use of vaccines to prevent the disease, and because of the scientific treatment of water supplies and the protection of food supplies from infection by flies.

Malta Fever

Malta fever is a disease found chiefly in the Island of Malta, the seat of a British garrison. The disease was the cause of serious disability to the army resulting in the invalidism of large numbers of men. The chief milk supply is from goats. Now the goat is proof against almost anything. He does not contract tuberculosis. He is able to live on the poorest kind of food. Indeed, he will eat anything from your husband's shirt to a newspaper. The germ of Malta Fever was discovered. The blood of goats was examined by some inquisitive doctor and the germ was found in the goat's milk and in the goat's blood. The discontinuance of this source of milk supply cut short the number of cases in the army in Malta within three years from an average of 450 cases to a single case, and has had the effect of the almost complete disappearance of the disease in human beings.

Malaria and Yellow Fever

Of all the advances made in the prevention of disease, the discovery of the causes of malaria and yellow fever are, perhaps, the most remarkable. In general, the path of infection of disease is directly from the sick to the well, or as in the case of plague and some others, the disease is carried by some animal or insect. In Malaria and Yellow Fever the disease is carried by mosquitos with a different variety of mosquito for each of these diseases. Not only so, but in order to infect a person the mosquito must first bite someone ill of Malaria or of Yellow Fever. Then the disease undergoes a life history in the mosquito. Further, the infecting mosquito is the female, and it only works under the cover of darkness. The Malaria mosquito, the Anopheles, chooses clean water, apart from the abode of man, as its breeding place, while the Stegomyia or Yellow Fever artist, is a domestic insect, living and breeding about dwelling places.

The ravages of these two diseases have been enormous. Formerly they made life in tropical and sub-tropical countries extremely hazardous. Originally coming from Africa, malaria invaded Italy, Greece and other of the ancient countries of Europe. Writers and scientific men ascribe the fall of Greece from her once mighty position in the ranks of great

nations to her miserable position of to-day, to the mental and physical effects of Malaria. Progress in the states of Central America, some of the southern United States, and to portions of South America, has probably been greatly delayed by these two diseases.

The brilliant discoveries of Laveran, a Frenchman, who first saw the plasmodium malariae in the blood of a patient, of Sir Patrick Manson, who discovered that the disease was transmitted by mosquitos; of Sir Ronald Ross and of McCallum, who proved the life history of the infecting agent in the mosquito; and of Low and Sambon, who proved that mosquito netting would allow them safely to live in malarial regions; and finally, of Sir Patrick Manson and Mr. Warren, who allowed themselves to be bitten by malaria infected mosquitoes transmitted from Rome to the London school of tropical medicine and who, as a result, contracted malaria are a combination of enduring and heroic work in the field of preventive medicine. They are records of self-sacrifice that put to shame the insane vapourings of the anti-vivisectionists who would neglect human life to protect that of a guinea-pig.

No less heroic were the experiments in respect to yellow fever. In 1881 Finlay had proved that yellow fever may be conveyed by the mosquito from man to man. In 1900 the United States Government despatched to Havana a Commission comprising Walter Read, Carroll, Lazear and Agramonte for the purpose of studying yellow fever. They erected a hut of two compartments separated by a fine-meshed screen. In the one compartment were mosquitoes infected from a case of yellow fever. In the other compartment the men slept in contact with clothing, sheets and linen soiled with the blood or vomit from yellow-fever patients.

These experiments went on for 21 days. The men took no harm. Thus they disproved the old belief that yellow fever can be transmitted by contagion. They then exposed themselves to the mosquitoes and all of them got the fever, and one, Dr. Lazear, died of the disease, a martyr to science.

Before these discoveries were made, De Lesseps, the great French engineer, had attempted and failed to build a canal across the Isthmus of Panama. In this attempt the region was literally strewn with the dead bodies of natives and white men dead of malaria and yellow fever, and the project ended in financial disaster. Since the establishment of the means of prevention of these diseases this great public work has been successfully accomplished, and the Panama zone is as healthy as any other region in the world. One by one the plague spots of malaria and yellow fever are being eliminated by the destruction of the breeding places of mosquitoes. These are but a few of the great advances in the realm of preventive medicine. Others, such as the work of Flexner on cerebro-spinal fever, on epidemic infantile paralysis, Erlich on syphilis,

Metchmikoff on arterio-sclerosis, Bruce on sleeping-sickness, Leishman on Kala-azar, Rogers on dysentery; these and the work on leprosy, relapsing fever, epidemic enteritis, oral sepsis (pyorrhoea), and general paralysis of the insane all have their foundation in the studies of the great Pasteur, who decided the basis of the study of all these affections. Not only the diseases of mankind but those of animals, of fruits, of agricultural products, of the dairy, in short, of everything that lives and grows, depend upon the germ theory of this remarkable man. In short, without his discoveries the world and everything in it might long ago have perished.

The latest example of a beneficent discovery I shall briefly refer to because I happen to be conversant with the details and have a personal knowledge of those concerned. No modern discovery in medicine has been so rapidly established, and none have had the degree of publicity given to the means of the cure of diabetes. The story of the discovery of this remedy is one of patient research and experiment in the domain of medicine. There is an organ of the body called the pancreas, in which certain portions called the islands of Langerhans, produce juices which are vital to the assimilation of the sugar taken into or formed in the human body. In diabetes these islands have been more or less destroyed with the consequence that the sugar which is a source of energy and necessary to the health and life of the body, are excreted and lost.

A young medical man named Banting began experimenting on dogs. He had the idea that if the secretion of these islands could be isolated and used as a method of treatment, diabetes might be overcome. Banting is the son of a farmer living in the neighbourhood in which I formerly practised medicine, and I have known him since infancy. His people are ordinary farm people, but his mother was of the keen type of Lowland Scot, who is popularly supposed to have the faculty of being "careful," At any rate the boy gets his genius from some quarter, and personally, I think it comes from the mother. In the course of his experiments he had associated with him a young graduate in Arts in the University of Toronto named "Best" whose father, a physician, like many another native of the Maritime Provinces, journeyed into Maine to make his living. Still another young doctor named Collip from Edmonton gave his aid, and to make a long story short, they were successful in making the discovery of Insulin (an extract from the islands) which, in a short space of time, has worked wonders in the saving of the lives of acute cases of diabetes. What makes the discovery so dramatic is that in cases which come to the hospital in the stage of coma, so well-known to medical men, and which heretofore always indicated impending death, a dose or two of this remedy brings, as it were, the patient back from the borders of the grave and soon restores him with the aid of suitable diet

to health and strength. There have been many cases (indeed most of them) of this character.

Above all the discoverers of this remedy have not sought to exploit it in their own financial interest. None of them had any greater resources than usually fall to the lot of the average student, yet they had no thought of using the discovery for their own benefit. It was handed over to the University of Toronto, and by that body patented and so arranged that its production should be at the lowest cost possible in the interest of the public. This new remedy was only possible of discovery by animal experimentation and is a further link in the long chain of events initiated by the illustrious Pasteur.

One could go on at length in illustration of the remarkable growth of preventive medicine.

What does this progress mean?

In a general way it means as the health officer of New York said a few days ago, "that fifty years ago two persons died from preventable diseases as compared with one to-day." It means that the death-rate of typhoid fever, which in cities was 53 per 100,000 of population is to-day but 4, that diphtheria is robbed of nearly all its terrors, that smallpox is a negligible affection, the most readily controlled of all the contagious diseases, that cholera, the plague, malaria and yellow fever are rapidly disappearing from the face of the earth, and that a host of affections are understood and have a known method of prevention. Millions of lives have been saved by the beneficent discoveries of science, greater comfort, increased health, happiness and prolongation of life are secured to the public.

But more is necessary. To reap to the full the benefit of this progress in public health, increased education of the people is necessary. When people understand what sanitary improvement means to themselves and to their children, reforms in this direction are easier of accomplishment. Increased and wise expenditure of money in public health work is essential. Full-time health officers, visiting nurses, pre-natal and post-natal care of women, prevention of the appalling death-rate among babies, sane medical inspection of school children, are all matters which merit the attention of municipal authorities. Often the work of the health officer, with its difficulties and trials, is disappointing. We take heart, however, with the knowledge of what great men in darker ages have achieved. We look to the example of such men as Jenner, and Lister, and Koch and Roux, and, above all, to Pasteur, and are cheered with the record of achievement they have left behind them. The infectious diseases have largely been conquered. Tuberculosis may be prevented. Public Health is Purchasable. Why not have it?

The Fourth Maudsley Lecture

DELIVERED BY C. K. CLARKE, M.D., LL.D.,

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At the Quarterly Meeting of the Medico-Psychological Association of Great Britain and Ireland, held at the House of the Royal Society of Medicine on Thursday, May 24, 1923

(*Continued from last issue*)

The very fact that so little satisfactory work has been done on the psychoses of children is in itself evidence that the matter has escaped the attention of most psychiatrists. The physicians in hospitals for the insane are, as a rule, without practical experience in the matter, and those who are innocent of psychiatric training overlook what is obvious to the skilled observer. Careful investigation shows that in very early life the evolution of many cases of mental disease may be studied—it is to be hoped with advantage to the patient. As we all know, an immense number of patients admitted to asylums are already beyond hope, and even many of the so-called recoveries are simply cases restored to what has been the patient's normal for years. It must be frankly admitted that the psychiatry of the past has on the whole proved sadly disappointing. Has the ratio of actual recoveries increased in the last fifteen years?

The relations between law and medicine in psychiatric matters in Canada are most unsatisfactory. Our judges are of the highest type, men honoured and respected. The legal profession is, generally speaking, beyond suspicion. At the same time, the well-advised psychiatrist hesitates long before appearing in court to give evidence in criminal cases. He realises that the dice are loaded against him, because law has not waked up to the fact that mental disease is ordinarily a distinct entity, rather than an abstract something that can be explained by a few metaphysical or psychological speculations, or even by a merry jest, ill advised and often heartlessly cruel. In murder trials the McNaghten decision still works overtime, and if the law has been responsible for a large number of judicial murders in the case of crimes committed by insane or defective individuals, it has not realised the responsibility. Perhaps medicine has not been without blame, as so many untrained and poorly qualified practitioners, without knowledge of psychiatry, have been willing to pose as experts and to air their ignorance before equally ignorant juries. Psychi-

atrists of the new school must force the issue, and law must be taught that there are realms it cannot invade with success and do what it sets out to do, that is administer justice.

Already the thin end of the wedge has been driven in, and in one of our juvenile courts a psychiatrist advises the judge in all cases where mental defect or mental disease may be suspected. It is at this moment the Mental Hygiene Movement steps in and points out to communities their duty in such matters. Nothing has produced such a reaction before, and law is being forced to assume a broader minded policy in spite of itself. It cannot continue to play the *role* of the ostrich and hide its head in the sand with success. A careful and regular study of gaol and penitentiary populations by the judges would convince them that there is something askew in their kingdom. If Maudsley's *Responsibility in Mental Disease* could be made a legal text-book there would be a much saner policy developed in dealing with mental disease and mental defect, and the individual rather than the crime would be considered.

It is one of the problems the new psychiatry must deal with, and law would be well advised to meet the psychiatrist more than halfway and devise a method of dealing justly and sanely with those who require care and treatment, rather than punishment.

What of the psychiatry of the future? Are the psychologists, the psycho-analysts, the Freudians, the Jungians, and a dozen other theorists to effect a complete revolution? Can they with their sometimes attractive, and sometimes repulsive theories, sweep away all experience and substitute something far more vague and even more unsatisfactory? It appears that the time has come to revise our methods of educating psychiatrists. So strongly do we feel on the matter that in the University of Toronto, we have developed an optional course covering five years in psychology and psychiatry.

It has always been obvious that the young men entering asylums as clinicians and junior assistants did not go into the work with any degree of enthusiasm, and as a rule merely used the appointment as a stepping stone to something else more lucrative. There were few prizes worth striving for, and the quotation "all hope abandon ye who enter here" was only too frequently written over the door. The young graduate was ill equipped as far as psychology and psychiatry were concerned, but full of surgical, medical and laboratory training. If he pretty regularly deteriorated the fault was not his. General medicine and psychiatry have always been too far apart, and asylums have too long been closed corporations where the officials have instituted mutual admiration societies and looked down on those who fortunately escaped from the iron fetters of what too often becomes a narrow specialty. The war, of course, shook up the dry bones of psychiatric isolation and opened the eyes of the Rip

Van Winkles who had been asleep so many years. It showed most conclusively that psychiatry must change its educational methods completely. It might be advisable for many young psychiatrists to get most of their preliminary training in out-door clinics and psychopathic hospitals rather than in large institutions where the herding of chronics so often interferes with research and the study of the individual.

After much thought we have outlined a course of options in the University of Toronto, and already a group has advanced to the fourth year of the six years' course. They are receiving sixty hours a year of special training in psychology and psychiatry during five years. Out of eighty who applied for the option some thirty-five of the most brilliant were selected, and this group has been carefully weeded. During their second year in medicine they received a training in elementary psychology. In their third year a course of sixty hours in more advanced as well as experimental psychology is being given, and the students advised to take additional training in chemistry and physics. The fourth year has had sixty hours devoted to abnormal psychology, the exposition of the modern attitude of psychology towards mental defect and mental disease, taking in of course the theories of the Freudians, the psycho-analysts, etc. Practical work in the way of applying mental tests to normal and abnormal children has been given, and the work checked up with the idea of making the student familiar with the true value of mental tests, but showing also how they often fail to reveal the whole story. The fifth and sixth years of the course will be largely clinical, the work being carried on in the psychopathic hospital and psychiatric clinic at the Toronto General Hospital. These institutions are certain to offer no end of useful clinical material, which under our law is always available.

Such a course will, we hope, equip a band of young psychiatrists with a training of the most useful kind, ready not only to undertake institutional work if necessary, but to carry on practice among mentally diseased persons who do not require treatment in institutions. Such men will not fall easy victims to the thousand and one fads which have wrecked so many neurologists and psychologists, whose little learning has so frequently made them mad. The adoption, too, of the caravan clinic system of educating the public will prove invaluable. We shall, of course, follow your lead in the establishment of post-graduate courses in psychiatry, which have proved so stimulating and admirable with you. It is useless to condemn the failures of the past, the time has come to produce a new order of things in psychiatry, to break up the isolation of these institutional monarchs who have talked grandiloquently, if not always wisely, and who have in their ignorance delayed the progress of one of the most important departments of medicine.

The realm of research must be invaded as never before, and here we

feel that research must not be limited to institutions but be put on the broadest basis possible and include persistent investigation of mental development and mental disease in child life. Such a plan as that adopted in the Toronto Schools must eventually become a common one, and means intelligent co-operation between School Boards and Public Health Departments. Here, for example, we find the Public Health Department assuming full authority for the inspection of children and laying out the programme to be followed by the educational authorities in dealing with abnormal types. A psychiatric department exists, and is gradually being developed to such an extent that it is proving a powerful influence for good, and when its industrial and farm schools are in operation, further advances will take place. There is the closest co-operation between the Board of Education and the Board of Health on the subject of the mentality of the abnormal child, and it is clearly recognised that the question is a purely psychiatric and medical one, rather than pedagogical or psychological. Psychology only too often arrogates to itself the sole right to deal with the abnormal child, feeling certain that it is able to prescribe the proper treatment. Much as we are indebted to psychology for the splendid work done among the children of low intelligence, it is only too evident that it is incapable of understanding school pupils suffering from mental disease. To admit otherwise would be to recognise charlatanry as justifiable and advisable.

Our experience with different intelligence tests has now been so great that we are in a position to estimate their value as well as appreciate their inadequacy. Unfortunately their apparent simplicity and ease of application have resulted in the stimulation of the ambition of hosts of amateurs, especially teachers, whose work is harmful, being limited by lack of vision and knowledge, or a proper conception of the significance of the tests. They cannot understand the danger of accepting a standard of intelligence telling merely a portion of the story, and ignoring the part of it necessary to complete a picture of the child's mind and personality.

Group tests have proved of little value as they are ordinarily applied to school pupils beyond the age where tests of any kind reveal much of the complex of the individual. It may be said that the edge of the enthusiasm for tests of all kinds has gradually been dulled, and already there is a reaction against their indiscriminate use.

An outburst in another direction, though, is under active development, and in psychological and pedagogical circles the discussion of the supernormal child waxes warm. The term supernormal is unfortunate and unscientific, as it gives a false impression and by too many psychologists is loosely applied to a group including well-developed children above the average in intelligence and physique, as well as a group of physical and mental weaklings measuring high by the Binet Simon scale. In them

precocity is the outstanding feature, and their doom under ordinary circumstances easily foretold. What will happen to them under the forcing process so frequently recommended is well known to asylum physicians who constantly see these wrecks stranded early in university and scholastic careers. Possibly there is little chance of saving them under any circumstance, but there is no argument in favour of hurrying the calamity.

A year or so ago the truth of this was exemplified in a Canadian school where several brilliant pupils were paraded before our psychiatrist. He pointed out the fact that while the majority of these children were far above the average both in intelligence and physique, the most brilliant, whose intelligence quotient soared several years above his chronological age, was evidently on the verge of a mental and physical collapse. The authorities ignored the advice given to remove him from school for the time being, and to build up his bodily health, and as was to be expected his complete mental and physical downfall took place in a few months. We may easily agree on a plan looking to the speeding up of children above the average in physique and mentality, but it is a mistake to make a classification of supernormals without looking to the psychiatrist for advice and direction.

The most important part of the work of the Canadian National Committee for Mental Hygiene is to educate people to a knowledge of the importance of having well educated psychiatrists abroad in the community, with the idea of helping to keep the importance of prevention ever in mind, and to scan school populations with skilled eye with the hope of forestalling a thousand and one tragedies such as one sees to-day. In other words, psychiatry is no longer an ornamental appendage to a medical curriculum, but one of the most important branches of mental hygiene and preventive medicine and its development must be carefully undertaken by all live and progressive teaching bodies in universities and colleges.

It is plain that the psychiatrist of to-morrow must be educated along very different lines from those heretofore followed, and even the institutional physician must become something more than an administrative figure-head. His training must be of the kind to enable him to grapple with problems concerning individuals who are social misfits, as well as to analyse behaviour problems of all kinds. In other words, he must be in a position to give advice regarding the mental hygiene of the whole community. If he be content to narrow himself to the purely routine care and treatment of the forms of psychoses to be met with in certified cases in the wards of an asylum, he is simply sinking in the mire which has swallowed so many of the psychiatrists who have gone before.

It is obvious that outdoor departments or dispensaries should exist in connection with many institutions near urban centres, although this is

more easily accomplished in general hospitals or psychopathic clinics, where facilities for thorough examination exist and laboratory findings are obtainable at the minimum cost. Possibly there is more red tape here in connection with institutional matters than is the case beyond the sea, but the persistent attempt to break down the barriers imposed by tradition and ignorance is bearing fruit with us. The clinics have robbed the institutions of much of the stigma formerly attached to them. Voluntary admissions are growing in number. At the magnificent hospital in Whitby, Ontario, a large proportion of the admissions are voluntary, and so on through the different provinces. At the Westminster Military Hospital, London, Ontario, almost an ideal condition exists. The majority of the patients are voluntary admissions, and the organisation with its trained vocational teachers, its numerous industries, and its elaborate staff have robbed the asylum of many of its traditional terrors as well as helped its recovery rate.

So much might be said along these lines that one hesitates to open the subject. It is obvious, though, that if the psychiatrist of the future is to hold his place in medicine he must wake up to the fact that his kingdom is slipping from him and passing into hands far less competent to deal with the problems of prevention and cure than he. In other words, he must be a leader and assert himself as the final court of appeal in the guidance of the public in important questions of social rehabilitation of many cases now regularly institutionalised, as well as the cure of early disease wherever possible.

Then, again, the importance of prevention must never be forgotten. To do all this it is evident that psychiatrists must be emancipated from a great part of the administrative work which they are frequently ill trained to do efficiently. They must be given large staffs of specially trained social workers and nurses to carry on follow up work as well as make investigations of home conditions. Unless all of this is done the kingdom of psychiatry will be usurped by a host of faddists whose knowledge of medicine is *nil*, and who parade their speculative theories as facts before a non-discerning and gullible public. For example, take the exploitation of the Binet Simon tests in schools by all sorts of incompetent and unqualified individuals, whose sole claim to recognition is the fact that they have some tuition in psychology. Frequently they have not had even that. Great as has been the good following the proper application of intelligence tests in schools and the development of special classes for the subnormal, at the same time an infinite amount of harm has resulted from the ill-digested conclusions and recommendations of these tyros in experimental psychology. The reaction against the purely psychological point of view in school adjustments of mentally handicapped pupils has already shown itself in certain centres, and if the

greatest good is to follow the survey of school populations, psychiatrists must equip themselves to carry out this work in the best way possible, for after all it is distinctly a medical problem. How can a psychologist for example, diagnose and prescribe for a developing case of a manic depressive or a dementia præcox psychosis? There never was a time when psychiatry needed to take stock of its assets and liabilities as the present. There never was a moment in its history when the possibilities of this splendid department of medicine had such opportunities to come into its own. From a narrow specialty it may broaden into a mighty force to dam the streams of disease, vice, and social failure at their very sources, but it will never accomplish this by simply pooh-poohing the thousand and one fads which threaten the very foundation of our specialty.

Psychiatry must show the public its just reasons for existence, its readiness to adjust itself to the new order of things, and a constructive ability to do something more than merely provide custodial care for those who have fallen by the wayside. In other words, the psychiatrist of the future must be a man, not necessarily living in institutions, but found in every day life, ready to apply the ounce of prevention in preference to the pound of cure.

The Wassermann Reaction

By Dr. Joseph Gibbs, Vancouver, B.C.

(*Continued from last issue*)

(a) Push your 606 until the Wass. becomes negative.
(b) Push your 606 until the Wass. becomes fast.
(c) Push your 606 until the Wass. becomes cured.
(d) The patient becomes Arsenic fast.
(e) The patient himself becomes fast, as we find in our Post Mortems.

Considering (a) and (b). One small dose may produce a Negative Wass. and one hundred may not—who can tell when the limit of safety is reached and when we are dealing with a 'fast Wassermann' case? This idea is evidently what the Army treatment is based on—for when the first course failed to produce the desired results as judged by the Wass. a second course was administered—and that second course was repeated at intervals in many cases when the Wass. still remained Positive.

(c) Until the patient is cured. This is evidently judged by observation of Wass. reactions over a prolonged period.

I venture to say that there is not a living soul who can say when syphilis is really cured, so that to carry on weekly injections until a Wass. becomes negative, fast, or the patient is cured, is rather elusive.

(d) The patient becomes As. fast. When does this happen? How do we know? Then how many injections should one give until we are really sure our case is an As. fast one?

(e) We may stop short of this, although we have seen cases of the patient in toto becoming fast, and turning up on the P.M. table.

Now in all this the amount of As. to be used in any case is guided by the result of the Wass. reaction. If there were any limit to this it might not be bad, but in the Wass. fast cases, the As. fast cases, and the cure cases, there can be little or no limit for we have no possible way, until after a large amount of 606 has been used, of finding out these conditions —and by that time perhaps our patient has come under Class (e).

The question one would naturally ask himself is—can I do harm to my patient by repeated injections of 606, over an evidently indefinite time?

Now what have men found out who have used this drug a great deal? Thibierge, in his "Syphilis in the Army," page 145, says—"Owing to the elective toxicity of Arsenic for the liver, I consider it is better not to have recourse to it during the presence of icterus, nor till the liver has regained

its normal volume." Note the "elective toxicity of Arsenic for the liver."

It might be well to consider a vital point. Is not a drug that is bacteriotropic also organotropic, i.e., a drug introduced into the organism as 606 is usually administered, while destroying the infecting organism, does it not also destroy the body cells?

Some clinical side effects of 606 as described by Harrison in a Review —"The Treatment of Syphilis"—are summarised as follows:—

1°—Vaso-motor disturbances.
2°—Syncope.
3°—Pain in the gums and teeth.
4°—Peculiar taste in the mouth.
5°—Rigor, rise of temperature, headache.
6°—Vomiting, diarrhoea, pain in the back, cramp in the legs.
7°—Urticaria, herpes, (labialis and genitalis).
8°—Albuminuria.
9°—Stomatitis.
10°—Chronic headache, lassitude, loss of appetite, weight, and sleep.
11°—Erythenia and dermatitis.
12°—Jaundice.
13°—Severe cerebral symptoms.

As 13 is an unlucky number it may perhaps be just as well to add another.

14—(Not Harrison's). Found at Post Mortem—Destruction of liver cells ranging from a few to those of practically the entire organ.

Degeneration and destruction of kidney cells.

Multiple haemorrhages of stomach and deodenum.

Recognizing, as we do, that the majority of these symptoms point to a derangement of the great sympathetic nervous system and its ganglia, and knowing that this great nervous system controls circulation, secretion and peristaltic action, (in other words), the vital processes of the body, as also the organs which are responsible for the manifestation of these processes, it would almost seem that 606, unless we are careful, in addition to destroying the S.P. and spoiling a perfectly good Positive Wassermann really did do something to the body cells.

Everyone who has had experience to any great extent in the use of 606 has encountered each and every one of these "clinical side effects" in addition to others not mentioned here. In Army experience, jaundice was at times most prevalent—hundreds, and one might say, thousands of cases were encountered. A test for bile in the urine then became an important part of the routine test before the administration of an arsenical compound. But the alarming nature of this gradual gradation of symptoms above noted became strikingly apparent upon those cases where P.Ms. were made.

Looking over this list of clinical side effects, it can scarcely be wondered at that a number of cases came to the P.M. table. What the intermediate stages between simple irritation and death might show, can be left to conjecture. Time alone can tell—perhaps ten years.

True, toxines produced by the disease itself cause jaundice, therefore the more caution should be used in the use of a drug which in itself has an "elective effect on liver cells." The toxic effects of syphilis, plus the toxic effect of other infectious organisms, and also that of 606, make a formidable array and therefore it goes without saying that extra precautions should be carried out in the sterilization of all instruments and fluids used when administering the drug intravenously.

Now it seems to me that we have added to our list of troubles the fact that Arsenic in the form of 606, or its derivatives, is a very dangerous drug to use indiscriminately, especially when its use is controlled by such a little known reaction as the Wass. proves to be.

Now let us examine the Wass. reaction.

Craig and Lindsay give excellent descriptions of it. Fleming, late chief of the Venereal Disease Section of the Public Health Department at Ottawa, describes its birth as follows, under the heading,—

"Principles of Complement Fixation"

"The invasion of the body by the infecting organism, in all infectious diseases, calls forth the production of specific substances to combat these micro-organisms and their products.

The finding of these specific substances in the blood serves as a means of demonstrating and identifying disease.

Pfeiffer showed that the serum of animals infected by cholera acquired the power of dissolving the cholera bacillius, (bacteriolysis).

Bordet later showed that if the blood corpuscles of one animal are injected into another animal of a different species, that the serum of the latter animal acquires the property of being able to dissolve the blood corpuscles of the former, (haemolysis).

The substances so produced, which have this power, are specific, and resist 55° of heat (thermostabile) and they are called amboceptor.

Any foreign protein which, when injected, calls forth the production of an amboceptor is known as an antigen.

It was later demonstrated that the presence of a third substance was necessary to link antigen and amboceptor together, it is a normal constituent of serum and is destroyed by° of heat (thermotabile), and is called complement.

The application of these principles has been utilized in all complement fixation tests, and as applied to the diagnosis of syphilis is known as the 'Wassermann' test.

The blood serum or spinal fluid of the patient is mixed with a syphilitic antigen and complement. If the serum contains syphilitic amboceptor, complement is fixed, if not, complement is not fixed.

This reaction is invisible, therefore to visibly demonstrate it there is added a haemolytic system. This is composed of an antigen which consists of sheep's blood corpuscles and a quantity of amboceptor (heated serum of a rabbit that has been injected with sheep's corpuscles). It will be found, if the serum was from a syphilitic patient, complement has been fixed and there is no haemolysis of the sheep's corpuscles.

If the serum was from a normal individual and complement was not fixed, haemolysis of the sheep's corpuscles occur, that is, there was in the latter case complement left to unite with the antigen (sheep's corpuscles) the amboceptor (rabbit serum) with resulting haemolysis."

Now the parent of the Wass. reaction, is the principle that "infecting organisms in all infectious diseases, when invading the body, call forth the production of specific substances to combat these micro-organisms and their products, and it is the finding of these specific substances in the blood which serves as a means of identifying disease."

Note especially that these specific substances are "protective substances," and the positive test in any instance means that the serum examined contains the protective substances.

It naturally follows that we conclude that the patient's serum in general contains these protective substances, and further that because of this, he has been infected with the particular organism in question, otherwise this particular form of protection would not have been called forth. Therefore, the result of such a test is that if positive, we conclude our man has protection; if negative, that no protection is present.

Should we by finding the organisms in lesions, or by clinical evidence recognize the lesions as typical of production (we shall say) by this particular organism—and our man showed a negative serum reaction we would say he has built up not sufficient protection. In this instance we would no doubt consider our patient is in a rather precarious condition, especially if we know from the history of the case that this particular infection has existed for any length of time, and our patient showed signs of a septicaemic condition. It means that constitutionally he is not able to protect himself.

If the serum in this case gives a positive reaction we then know that our patient has built up a protection.

Should severe clinical symptoms be present in this instance, the conclusion seems natural, that although the serological test shows complement fixed, i.e., no haemolysis, that with his entire powers of protection in

action, yet it is not sufficient to prevent the onward destructive action of the organisms. The indication would then be tonic treatment, not vaccine.

The test, or reaction which gives us this information is known as a "Specific Antigen Antibody Reaction," in other words, a specific organism such as the Gonococcus will produce or call forth a specific antibody in the serum whose function it is to neutralise or destroy the gonococcus and its toxins, which invades the system."

When this reaction is present we conclude that at some time in the past and possibly at the existing time gonococci have become more or less generalised. As it is a test for fixation of complement, and as complement is fixed only in the presence of a specific amboceptor, and as the two, viz., amboceptor and complement together form the antibody or protecting substance, therefore our test is a test of antibody formation and *not* an indication of living organisms.

It really says nothing whatever about living organisms being present. It does say that at some time either past or present, living or dead organisms have invaded the system, otherwise there would have been no need for calling out the defence.

We utilized this principle in the Army when we injected the men with dead typhoid organisms (vaccine) with the object of calling forth a defence against living typhoid germs, which might be introduced into the body through drinking water, etc. The efficacy of this preventive treatment was apparent in the low percentage of typhoid among the allied soldiers in the notorious typhoid areas of Flanders Fields.

If the blood serum of these soldiers had been examined for typhoid antibodies or typhoid agglutenins, i.e., if the agglutenin test had been applied it would have been found positive. It certainly would not mean that they were suffering from typhoid fever nor that they were harbouring living typhoid organisms. The principle of complement fixation, is a principle, and is recognized as such by all serologists; therefore is applicable to other infective organisms. It would seem then that a positive result in a complement fixation test has nothing whatever to do with the presence of living pathogenic organisms.

This is the most important point in the interpretation of results, and it is just here that the car skids and goes over the bank. Here we come to the parting of the ways in diametrically opposite directions. If the theory of the principle is true, then our object in treatment would be to build up our patient in order that he can defend himself. This seems to be Nature's way of doing things and it would seem to be our duty to assist in every possible way. If our test results prove positive surely we cannot be justified in flying in the face of a kindly Providence who has supplied this protection and literally telling Him his method is very poor and then

proceed to knock it down (produce a negative result) and show Him how we can turn the trick unaided.

If such tests are used and "strongly recommended as a test of cure"—then we infer that the recommender interprets the Positive test as an indication of the presence of living pathogenic organisms, and a negative or a repeated negative as an indication of cure; then our theories of vaccines and serums (antibodies and antitoxins) are all buncum. So far as I am able to judge, the man who interprets a complement fixation test as an indication of the presence or absence of living pathogenic organisms is a poor reasoner and a worse advisor. He is the man who says a positive Wassermann means living S.P.; which is not true, neither from a serological nor a clinical view point. In one gulp he swallows the principles of complement fixation, interprets the results in the very opposite direction to what they mean, advises the continuation of treatment (and in syphilis our 14 points show this to be a very dangerous procedure) until the complement is no longer fixed, admits he knows nothing as to what the Wass. reaction stands for, then renigs, and says it means living S.P.—then advises the almost unlimited use of a dangerous drug like 606, and takes unto himself the advising of the treatment of a disease of such far-reaching importance that the late Sir Wm. Osler put into a category pre-eminently above all and any other one disease when he said—"know Syphilis in all its manifestations and relations, and all other things clinical will be added unto you." In other words, the serologist, for he is the primary factor in the trouble, has voted himself advisor on all things clinical.

The majority of these self-constituted advisors know nothing about clinical syphilis, their writings and advice prove that, but a little thing like that does not seem to upset their estimate of themselves.

Their alibi is that the antigen in the test is not a specific one. They say it is a Lipoid—or perhaps a Lipoid-globulin complex, so is the chemistry of the S.P. There are such things as group reactions, and they admit this themselves, then why may not the Wass. reaction be a bio-chemical group reaction, and the test really be a test of antibody formation?

The reaction does not appear until a reasonable time has elapsed after infection occurs; this happens in the other complement fixation reactions, and these latter are true protective processes. Shortly after the Wass. becomes positive the primary and secondary symptoms of syphilis disappear without any treatment and might not this disappearance be due to real antibody formation?

So far as we are able to judge of cure, many of these cases are cured without resort to any specific treatment, hinting that the infected person has been able to provide protective measures to deal with the infection.

But why serologists are so persistent in interpreting this reaction in

the very opposite manner to any other antigen-antibody reaction is beyond me. Why advise the use of such a powerful drug as 606 on such absurd grounds?

In infectious diseases other than syphilis the watchword in present times is to produce and maintain all the protection possible, the measure of protection present in any particular case being judged by the serum reaction.

In the prevention of infectious disease we utilize the principle of complement fixation or antibody formation, by the use of vaccines.

In syphilis, by virtue of a peculiar mental twist, ignorance of clinical syphilis, half-baked knowledge of the bio-chemistry of the S.P., and of the antigens used in the test, ignorance of the effect of the arsenical and other drugs used in the treatment of the disease, we have the sorry spectacle of the recommendation of continuation of treatment until a certain serological test becomes negative, a test which no one, and especially the advocates of it, have the least idea of what it is a measure of.

Students leaving our Medical Colleges exhibit a profound knowledge of this important disease. Armed with a 10 cc. syringe they collect some blood, ship it to the nearest Lab., give seven to seventy injections of 606 and Mercury, the amount and number depending upon the Lab. report, and consider they have done all that can be done for their patient. A great majority of practicing physicians throughout the country are carrying on in the self-same way.

I think there can be no doubt about the truth of the following statement as viewed from present day standpoints:—

(a) That the Wass. reaction is generally recognized as the surest guide to the treatment of syphilis.

(b) The amount of 606 used and the frequency of dose is measured by the results of this test.

(c) That the Wass. result as at present interpreted is exactly opposite to that of other complement fixation tests, from which its idea has been derived.

(d) That serologists alone are responsible for that interpretation.

(f) That they have constituted themselves an advisory board on all clinical subjects—according to Osler's terse saying.

(g) That it is the duty of the profession in general and the teaching section of it in our Medical Schools, in particular, to waken up to the fact that all other things clinical are liable to go the way of syphilis.

After struggling for years on this darned Wass. stuff, and immediately following two years of most strenuous hunting and fishing on the same subject, I asked the late Dr. John Mallock of Toronto, his opinion of the Wass. reaction. He said—"So far as I can see, when it is positive you

may have syphilis, and you may not, and when it is negative you may be cured, and you may not."

This, it seems to me, is about the way the serologist looks at it away down in his heart and, is perhaps not too bad a rule to follow.

In conclusion, allow me to say:—

1st. That the Wass. is but one letter in the word spelling the diagnosis of syphilis—clinical symptoms and history can never be ignored.

2nd. While a useful aid at times in diagnosis—it should never, never be considered as a guide to treatment.

3rd. Never give 606, thinking it will cure all syphilis; in that respect it has been weighed in the balance and found wanting—only amateurs forget the proper use of Hg. and Iodides.

4th. Treat the patient, not the Wassermann. A few drinks of whiskey will cure the Wassermann.

5th. Treat the bacteriologist and serologist kindly, for they no doubt have done a lot of good things with a lot of bad ones, like all the rest of us, but don't believe all they say.

6th. Don't forget that a drug that is bacteriotropic is also organotropic, and that a reckless use of 606 or Hg. may do unreparable damage, and the latter end of that patient be worse than the first.

7th. That the time to treat Venereal Disease is before you get it, for no living soul can tell definitely when a syphilis or gonorrhoea is really cured.

8th. An error in the premise leads to an error in the conclusion.

9th. That due to this error in the premise, the number of neurosyphilitics will be vastly increased—owing to the damage done to the nerve centres by an over too enthusiastic use of Arsenical compounds.

10th. That the reason more damage is not already done is because a kindly Nature, as shown by French investigators, has utilized its antitoxin and antibody principle to counteract a flood of As. into the blood stream.

A Renaissance Physician's Tribute to a Deceased Colleague

By The Honourable William Renwick Riddell, LL.D., F.R.S.C., etc.

EVERYONE has heard of Odium Medicum, the jealousy and enmity toward each other of medical practitioners, second only to the Odium Theologicum, if even to that.

The well-known doctor who would take anything from his confrere but his medicine, was outdone by Dr. Sir Samuel Garth, who retaliated on his competitor, Dr. Sir Richard Blackmore—whom, by the way, he dubbed "the merry poetaster of Saddlers' Hall in Cheapside":

> "Unwieldy pedant let thy awkward muse
> With censures praise, with flatteries abuse;
> . . . . . .
> Thy feeble satires ne'er can do him wrong,
> Thy poems and thy patients live not long."

Much more pleasant is it to recall words and acts of friendship by medical men toward each other.

Dr. Richard Mead, a convinced Whig, when called to attend Walpole, refused to prescribe for him until he should release Dr. John Freind from the Tower into which he had got himself in his violent Toryism by taking part in Atterbury's mad scheme for reinstating the Stewarts—and Mead and Freind had nothing in common but their scholarship and their profession—they differed in politics, in theory of medicine and its practice as well as in nearly everything else.

One very beautiful instance of appreciation by one doctor of another comes to us from the Italy of the Renaissance.

In Verona, early in the Sixteenth Century, lived two very celebrated physicians, between whom there was the greatest rivalry. Both were able, zealous and learned; one, Girolamo Fracastoro, was of the first rank, not only in medicine, but also in mathematics, astronomy and philosophy, while no less competent an authority than Julius Caesar Scaliger pronounced him second to Vergil alone in Latin verse. The other, Joannes Baptista Montanus, was of high rank in medicine, but though learned, he had not the facility of Fracastoro in verse—he made up for this deficiency by the intensity of his hostility to his colleagues.

On the death of Montanus (1540) all enmity was forgotten; and

Fracastoro wrote the following elegiacs in memory of his former adversary:

"In mortem Joannis Baptista Montani,
Medici Veronensis.
Dum medica, Montane, doces ope vincere fata
Et Lachesi inuita, viuere posse diu
Lethaeo indignans pressit te Parca, sopore
Et secuit vitae grandia fila tuae
Sic, animas et tu Aesclepides subtrahis orco
Te quoque saeuorum perdidit ira Deum."

"On the death of Joannes Baptista Montanus, Physician of Verona: While, O Montanus, thou art teaching by the help of medicine to conquer the Fates, and against the will of Lachesis to be able to live long, indignant Fate has pressed thee down with the sleep of Lethe and cut the great cords of thy life. Thou, too, a son of Aesculapius, drawest souls from death, and thee, too, the wrath of the vengeful gods hath destroyed."

Is it possible that Milton, who read everything, had these lines in mind when he made Lachesis "with her abhorred shears," "slit the newspun life?"

In any case, the comparison of the physician to the great founder of his art both in his skill and in his fate is as beautiful as it is creditable to the charity of the author—it will be remembered that in the old myth, Aesculapius was slain by the angry gods for preserving so many souls from Hades, but he was taken to Heaven by Jove—Fracastoro, no doubt, suggests the same happy fate for the son as for the great father.

The members of the third of the learned professions, the Gentleman of the Long Robe, have not generally carried professional controversy into private life—as a rule, they

"Strive mightily, but eat and drink as friends
There is no such thing as Odium Forense."

Osgoode Hall, Toronto,
June 23, 1923.

Carcinoma of the Stomach and Its Relation to Preceding Gastric Disease*

By Wm. Goldie, M.B., Toronto, Associate Professor of Medicine, University of Toronto

THE essential cause of carcinoma is as yet unknown, but for long there has been an impression which is "fixing" as an opinion that the great majority of cases are due to long continued irritation, no matter where the site may be. Carcinoma has followed upon long continued experimental irritation of the skin, but there exists no such data for the origin of carcinoma of the stomach.

The relationship between carcinoma of the stomach and ulcer of the stomach has been the subject of much discussion. The majority of those who considered that there was a definite relationship were surgeons, and the majority of those maintaining there was no relationship were physicians. For several years medical literature was entertained and informed by a lively controversy on this subject between two noted pathologists.

But the controversy between the rival schools has subsided, for more carefully acquired data has, through exhaustive history-taking and checking by roentgen ray examination, led to the conclusion that while carcinoma may develop at the site of existing ulcer or on the scars of former ulcers, yet it is comparatively rare for it to do so. Varying statistics show that cases of carcinoma of the stomach give a history of ulcer of the stomach in from three per cent. to fourteen per cent. From the standpoint as to the number of ulcer cases that develop carcinoma we have no certain data.

To illustrate the relationship of carcinoma to other diseases of the stomach I will give you the analysis of 108 cases of carcinoma of the stomach. In seventy-five the first symptoms of indigestion arose with the onset of carcinoma: thirty-three cases give a history of having had indigestion for varying periods of time, but all showed a distinct change of symptoms in the onset and course of the carcinoma. Of these thirty-three, twelve cases give a distinct history of ulcer: five of these give a history of ulcer with symptoms recurring or continuous for twenty, sixteen, six, three and two years respectively: one case had been without symptoms for two years: six cases had been without symptoms of ulcer for over ten years: nine give a history of gall bladder disease with indigestion for many

*Read before the Annual Meeting of the Ontario Health Officers' Association, Toronto, May, 1923.

years: three give a history of duodenal ulcer, one of these with symptoms during the last two years; two without symptoms for sixteen and nine years respectively: one case gave a history of recurring attacks of acute gastro-enteritis: one had suffered from angina pectoris and stomach symptoms for five years: one case gave a history of nausea and vomiting when under nervous tension: seven cases gave a history of indefinite indigestion: two had indefinite symptoms from childhood: two had indefinite symptoms for five and four years respectively, and three with indefinite history had been without symptoms for twenty and fifteen years respectively.

The relationship between ulcer and carcinoma as shown by these figures is in keeping with the clinical experiences of others.

You will notice that thirty-three cases out of one hundred and eight had had digestive disturbances, and of these only nine had been without symptoms for the previous ten years. This is a much higher percentage than I had expected from other statistics, and I am quite certain that it is not high enough, for many of these cases reported as never having indigestion previously were hospital cases in whose histories there is evidence that an exhaustive cross examination had not been carried out. The taking of histories has steadily improved and the recent case records show a very much closer enquiry into preceding digestive troubles, and in the last twenty-seven cases, eleven gave a definite history of digestive troubles recently or over long periods of time.

There is another point which is usually not realized, namely, that all the symptoms of gastric disturbance arise because of interference with muscular function, and that minor and local irritations of the mucous membrane might exist for long periods of time without any discomfort being complained of by the patient. In support of this there have been recorded many observations clinical and by roentgen ray examination showing that abrasions and mucous membrane ulcers do exist without symptoms.

Of course, there are other factors which may enter into the production of carcinoma. It is quite evident that the majority of cases occur at a certain period of life and that occasionally a certain group or family seem to be more subject to its occurrence. In this regard it is interesting to note that of the 108 cases quoted seven of them developed carcinoma below the age of forty—at twenty-eight, thirty-one, thirty-four, thirty-four, thirty-seven, thirty-eight and thirty-nine respectively—and that of these the one at twenty-eight gave a history of ulcer a year previously, the one at thirty-one gave a prolonged history of gall-bladder disease, the one at thirty-four gave a history of three years probably ulcer, the one at thirty-nine had had indefinite symptoms from childhood, and the ones of thirty-four, thirty-seven and thirty-eight could not give any history of having had

gastric trouble; that is, four out of the seven gave a recent or prolonged history of gastric irritation.

Conclusions: (1) It would be wise then to advise all patients with continued gastric troubles to have these cleared up as soon as possible. (2) Any patient who, having had indigestion in the past, and whose symptoms suddenly change, or any patient who in mid-life should suddenly develop indigestion, should be looked upon as having carcinoma of the stomach, until it is proved not to be so.

CARCINOMA OF THE STOMACH.

108 Cases.

75 never had previous symptoms of indigestion.

33 had had previous symptoms recently or long before, but the symptoms were not similar to present complaints.

12 give a history of ulcer.
9 " " of gall bladder disease.
3 " " of duodenal ulcer.
1 " " of recurring gastro-enteritis.
1 " " of angina pectoris and indigestion for five years.
1 " " of nausea and vomiting whenever worried.
6 " " of indefinite indigestions.

Ulcer cases 12.

5 had been suffering from recurring or continuous symptoms for 20, 16, 6, 3 and 2 years.
1 had no symptoms for 2 years.
6 had no symptoms for over 10 years.

Duodenal Ulcer 3.

1 with symptoms for last 2 years.
2 had no symptoms for 16 and 9 years respectively.

Indefinite cases 6.

2 with symptoms from childhood.
2 " " for 5 and 4 years respectively.
2 without symptoms for 20 and 15 years respectively.

A Southern Doctor

By Jean E. Browne

CANADIANS frequently have their pride piqued by hearing their country spoken of as a northern wilderness, or as a snow-bound country mostly inhabited by Indians. As a recent writer in *The Canadian Forum* has pointed out, this impression seems to be substantiated by the fantastic scenes depicted by the motion pictures. A very similar misapprehension would appear to exist in our minds concerning Texas, a vast country within a country. We are accustomed to seeing pictures of wild ranch life, with every man carrying the law in his hip pocket, and it is some surprise to us when we find that Texas is one of the most progressive and law-abiding, as well as one of the most charming states in the Union.

My preliminary remarks are not intended as an introduction to the cotton, cattle or oil resources of Texas, but rather as a setting for a remarkable personality. If a popular vote were taken, there could be little doubt that Dr. A. C. Scott of Temple would be declared to be the best known and best loved man in Texas.

In the first place, Dr. Scott is a great surgeon. From a small beginning, he has built up a clinic at Temple, which is known throughout the United States and which is a Mecca for patients from a huge territory in the Central Southern States. The large and beautiful central building with a suggestion of the Spanish style of architecture has three operating rooms and accommodation for 125 patients. A newer building is devoted entirely to the clinic work and administration, while several one-storey frame buildings, carefully planned, are being used to keep pace with the constant expansion which is taking place. There is not the faintest trace of that institutional atmosphere which is the curse of most hospitals. On the contrary, it is radiantly pervaded by the genial, optimistic personality of its founder. The writer has had the privilege of seeing a good deal of what is considered the best surgery, but has seldom seen demonstrated to the same extent the combination of scientific surgery with low voices and gentle manners and a considerate courtesy for associates, patients, and the friends of patients.

Dr. Scott has gathered about him a staff of experts, most of them graduates of the outstanding medical colleges of the eastern States. In this clinic young men of ability are given an opportunity to develop without the crippling effects of professional jealousies. Co-operation is

a word on everyone's lips, but it is a thing which most of us know little about. It is magnificently exemplified in the Scott clinic.

Dr. Scott is perhaps best known throughout the country for his cauterizing operation for cancer. He has been using this method for the last thirteen years with quite remarkable results. The two great points in favour of the cautery are: That the instrument is always sterile and that post operative pain is reduced to a minimum. The benefit of the latter is obvious. The benefit of the former may become as obvious when further information about cancer is revealed. Besides perfecting his technique in cancer operations, Dr. Scott has been preaching for years the prevention of cancer mortality to the people of his own State. The result is that patients are presenting themselves for treatment in the early stages of the disease. The effects of this on the mortality statistics of the State are not yet apparent, but it seems likely that there will be concrete evidence during the next five or ten years of the lessening of the mortality rate from this disease.

A remarkable feature of the Scott Hospital is its farm which supplies clean milk and newly laid eggs for the patients and incidentally is a good investment by reason of its supply of hogs. By the time the clinic was running smoothly, Dr. Scott was able to concentrate his attention on agricultural matters. After reading all the State and Federal publications on agriculture he devoted his own inventive genius to the task of turning theories to practical account with the result that he has worked out an experiment which will no doubt be duplicated by enterprising farmers elsewhere. His herd consists of Holsteins and Jerseys. The herd has been tuberculin-tested and is 100 per cent. free of tuberculosis. The building in which the cows are milked has the regulation concrete floor which is thoroughly flushed out with hose before milking time. The milkmen are provided with dressing-rooms where they wash and change to clean white suits before milking. A special shed where hay is fed to the cows reduces dust in the milking building to a minimum.

With all these precautions, when flies are bad and the cows must switch their tails, the bacterial count remained high. To eliminate this Dr. Scott devised a most ingenious method. The cows coming in from outside covered with flies are made to walk through a dark passage across which three sets of canvas curtains weighted at the bottom are stretched. These scrape the back and sides of each cow as she passes through. By the time she has gone through the third set all the flies have been removed. In this passage is one small window. The light attracts the flies that have been scraped off, and there they meet their destiny in a trap.

The milk is filtered through several layers of gauze and absorbent into thoroughly clean and scalded cans. All this careful thinking and

planning results in a uniformly low bacterial count. A great deal more could be told about the balanced diet of the herd, and the resultant high fat content of the milk. Dr. Scott does not claim to be an expert in public health; nevertheless, he has made a practical contribution to the cause, and has shown how the best milk may be produced on sound economic lines.

There is little doubt of the impression this scientific agricultural experiment is making on the surrounding farmers. While we were inspecting the absolutely odourless hog runs we came on an old native Texan inspecting the concrete feeding troughs. In answer to the doctor's friendly greetings he said: "Ah jes' want to tell you-all, doctah, that that thah hog ranch is the most completest thing ah evah did see."

Coming back to hospitals, Dr. Scott has charge of the Santa Fe Railway hospital of 425 beds. For thirty years he has been chief surgeon of the southern division of the Santa Fe. For many years this service has been free from the dissatisfaction and petitions that are so common to railway medical service. Soon after the doctor had taken over the service a small group of malcontents sent in a petition to the General Superintendent for his removal. When the charges were sifted down they were not substantiated. Many years afterwards the wife of one of the instigators was operated on by Dr. Scott. So completely was her husband won over by the care given to his wife that he went to the doctor and told him of the conspiracy against him that had taken place years before, and confessed what he called "the low-down meanness of which he had been guilty." Needless to say, he is now one of the doctor's most devoted friends.

Dr. Scott is now President of the Texas Medical Association. His administration will be remembered by the scheme of popular health education which he is now launching in the State. No one has had a better opportunity than he of observing the untold harm that is being done by so-called healing cults which thrive on the gullibility of otherwise intelligent people. He admits that the medical profession is to blame for this, in that they have built up a mystic wall around medical science. Now he proposes through his organization to bring the facts of medical science to the attention of the intelligent part of each community in the state, through the organization of a public health council in each county. The council will be composed of representative men and women selected from the various professions and occupations and other welfare organizations, together with a small scientific committee composed of physicians chosen by the County Medical Society. It is expected that this Council will meet once a month at a luncheon or in any other manner desired, and that at each of these meetings there will be an address on some phase of public health given by an expert.

This council is expected to create sound public opinion on health matters in the community, and to stimulate concerted action for the promotion of specific health projects. There will be exhaustive studies of such subjects as malaria, typhoid fever, tuberculosis, cancer, hygiene in the schools, and many other similar topics.

The plan itself is unique. We are all familiar with attempts that have been made, especially since the war, to disseminate health information among the people. But all such plans have fallen short of their fulfilment because they lacked the active participation of the medical profession. This is the first instance of which the writer has any knowledge of such a scheme being commenced under the leadership of those best qualified to give it—the members of the medical profession.

Such a plan unselfishly carried out will be a case of the physicians casting their bread upon the waters. It will mean a process of re-education for many of their own members that will have much of the value of a post graduate course. Much more than a knowledge of the cause and treatment of disease will be necessary for leadership in a movement of this sort. At the same time it is bound to restore the confidence of the whole body of the people in the legitimate practice of medicine. Meanwhile, the progressive element in other parts of this continent should keep an eye on the Texas experiment.

Like most really great men, Dr. Scott is modest and unassuming. Perhaps it is his keen sense of humour that has helped him to see things in their right proportions. He regales his friends with his witty stories, many of them at his own expense.

A few years ago he walked into a hotel in a town on the Mexican border. He was in hunting attire, for hunting is one of his recreations. He inquired of the gum-chewing lady at the desk if Dr. Smith had arrived. He was told that Dr. Smith was not there at present, but the information was volunteered that he had been there looking for Dr. Scott of Temple. The man in hunting attire said he was Dr. Scott, whereupon the young lady gasped and then said in a high-pitched voice so that all the rotunda might hear: "Oh, are you the notorious Dr. Scott? Why, I met you once. You operated on a friend of mine. She died."

The doctor has an embarrassing weakness of not being able to remember names. A few years ago a state medical meeting was held in Temple. The night before the doctor fell asleep thinking of the manifold social duties of the next day. The ideas trailed on into a dream. The doctor found himself introducing two friends of his to each other—Dr. Smith and Dr. O'Leary. He said: "Dr. Smith, allow me to introduce my friend, Dr. buh-buh-buh-b-b-b—say it yourself," turning in despair to his friend. Then Dr. O'Leary had his turn and he commenced:

"My name is buh-buh-buh-b-b-b . . .", and after many painful attempts, "I can't say it myself."

We have heard much in the last few years of a thing called "international friendliness" and the hope has been expressed that it might supersede a narrow nationalism. H. G. Wells has written a good deal about "citizens of the world." Perhaps I am not the only Canadian who had never seen such an idea exemplified in flesh and blood. Dr. Scott is such a man. He is a southern gentleman, and a great surgeon, but in the last analysis he is one of those rare souls whose inspiration reaches out to enrich mankind without any limitations as to nationality or creed.

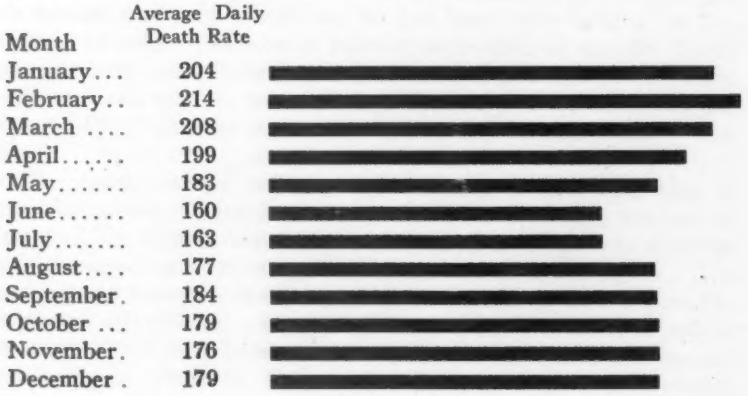
February—The Peak Month

By Ruggles George, B.A., M.B., D.P.H.

THE text for this article is a report prepared by the Dominion Bureau of Statistics showing the number of deaths month by month in the Canadian Registration Area. The total number of deaths reported in 1921 was 67,722, divided by months as follows:

Month	Total Deaths	Average Daily Death Rate
January	6,377	204
February	5,985	214
March	6,441	208
April	5,981	199
May	5,674	183
June	4,800	160
July	5,067	163
August	5,486	177
September	5,531	184
October	5,564	179
November	5,279	176
December	5,537	179

These monthly returns are illustrated in the accompanying diagram. The length of each column represents the number of deaths reported during the month and shows the variation from month to month. As the number of days is not the same in all months, the diagram shows the average daily death rate during each month.



More deaths are reported in February than in any other month. February is the peak month for deaths. Thereafter, the number decreases month by month to June, the healthiest month of the year. In the latter months of the summer, diarrhoea takes its toll of infant life and in the autumn when the indoor season commences, the number of colds increases and will be followed by deaths from pneumonia during the winter.

Health Officers have these charts before them all the time. They know in the sunny, healthy summertime that the winter rise will come and that in February every business will be somewhat handicapped by the illness of workers, every school will be inefficient because pupils are sick at home and hundreds of people in excess of normal will die.

When they see an increase of coughs and colds in October they know that the soil is being seeded for a crop of pneumonia in February and March. When they see the annual November rise in sore throats, they can visualize the annual crop of rheumatism, which is followed before the next June. They see it and do their little best to break the succession of steps toward the February peak.

Very much more would be accomplished if the people themselves understood their relation in the matter. A cold may be a trifling matter to some strong man, but he may cough in the face of some weak child or, having infected his own hands, he may thus infect some friend and cause him to die from pneumonia. Never mind about details just now. It is enough to know this. We are climbing toward the February peak. That is plain. Some of the responsibility for the portending trouble rests with you.

Social Background

Men Who Run Away

F. N. STAPLEFORD
General Secretary, Neighbourhood Workers' Association

THE Army has a short and ready method of dealing with deserters. While on active service in wartime, the man who deserts is very apt to face a firing squad at dawn. It is no less a crime for a man to desert his family, leaving them to face want and privation while he light-heartedly turns his attention to new scenes and adventures.

Wife and family desertion is at the present time a very great, and it is to be feared, growing evil. It is just as fundamental an attack upon the fabric of family life as is divorce or immorality. The unity of national life is not the individual, but the family, and the welfare of the family is bound up absolutely with the virility and cohesion of family life. The prevalence of desertion is a symptom of widespread family instability. It is not especially due to economic pressure, although that enters into a number of cases, but on the contrary desertion reaches its peak during the times of greatest prosperity. During the war period many marriages were entered into hastily by people who scarcely knew each other. The necessities of war ride ruthlessly over courtship and family affection, and sudden partings often precipitate action which, if there had been time for calm reflection, would never have taken place.

Desertion was, of course, a problem before the war, and will continue to be a problem when the present excitement, left as a war legacy, has settled into more normal channels. The war intensified an already existing condition.

The problem of desertion throws a great weight of responsibility upon the community in the way of support for the wife and children. This support is not, and should not be, so cheerfully undertaken as in the case of the widow. The fact that family obligations sit lightly upon a good many men is no good reason why the responsibility of supporting their families should be taken from them. Some men are like that man who felt that he had fully discharged his duty to his family and made adequate provision for them by directing his wife to go to a charitable organization for support, and then he himself departed for parts unknown with a clear conscience.

While actual statistics are lacking there is very good reason to believe that there are more deserted wives than there are widows. About ten to twelve per cent. of dependency arises from this cause. Every community all over the country is spending large sums in the maintenance of families left in this situation. A very considerable number of the children in so-called "orphanages" are the children of deserted fathers. Juvenile delinquency thrives also under such situations, as the wife left without support frequently has to neglect her children in order to earn a living for them.

There will need to be a new consciousness of the seriousness of this offence. There are, indeed, laws against desertion but they have been as a rule not enforced. A man can escape his family obligations with ridiculous ease. Some of these desertions are of a particularly cowardly character. A favourite time appears to be just before the expected confinement of the wife; but so far no adequate attempt has been made to determinedly follow up and punish such cases. It appears to be not a very serious offence—a mere breach of etiquette, as it were, calling down gentle reproof. For example, a man deserted his wife and children in Toronto and went to Montreal; his address there was known but there were no funds available for bringing him back to Toronto to be tried for this offence. He lived there a number of months quite immune from any punishment. Then there arose some question that this man was connected with the theft of an automobile in Toronto. Instantly the long arm of the law reached out, picked him up in Montreal and brought him back to Toronto for a trial and punishment.

Another case illustrates the futility of official action, in nullifying the heroic efforts of the social agency in the rare cases in which a deserter is actually brought back: A man who was already under court order to pay a weekly sum to a deserted wife and seven children and who had skipped out of town without a single payment, was located after three months by a social agency and through its efforts was brought back to Toronto for trial. A clear case was made against him and it was shown that while he had been earning $40.00 a week his wife and children had cost the municipality in public relief upwards of $638.00, in addition to miscellaneous assistance from private sources. To the surprise of the social agency concerned the Crown took the attitude that to imprison the man would serve no useful purpose but would merely add another person for the municipality to support, and that the man should be encouraged to leave the city at once. Whereupon the court let the man go on suspended sentence and he left the city the same day. He immediately changed his address and his job and has not contributed a copper to the support of his family since. The result is, that in spite of the efforts and sacrifices of the social agency in finally obtaining a con-

viction, absolutely nothing was accomplished in the direction of enforcing the responsibility of this particular man to his family or of fathers in general to theirs. On the contrary cases such as these cited above have brought the law into contempt and have encouraged delinquent husbands and fathers to evade their responsibilities in the knowledge that no real penalties may be expected to follow.

Some, indeed, defend this lack of action in many cases on the ground that the man is, after all, worthless and would be of no use to his family in any case. That is so, but it does not alter the seriousness of his offence. If a man commits an offence against property the view is not taken that after all the community is well rid of him if he leaves the city; he is promptly brought back and punished as a deterrent to others. The ridiculous ease with which desertion can be accomplished now, and the immunity of deserters, is a standing invitation to a great many of those who are wobbling on the verge of such action and looking with yearning eyes out to a care-free and wifeless world.

The method of sentencing a man to jail and then permitting him to work at remunerative labour, sending the proceeds to the wife, has been worked out in some cases in Ontario under the Parole Board and is a method particularly adapted for dealing with situations such as these; but even if no financial benefit may be expected, the man should still be brought back and punished as a deterrent to others.

This is not to assume, of course, that desertion is always the fault of the man; bad housekeeping, peevishness, nagging and even immorality on the part of the wife may sometimes explain—if it does not justify—the desertion of husbands. But even in cases of this kind, where there are children involved, the principle is still clear—the father is responsible for the support of his children rather than the community at large. One loop-hole has, indeed, been stopped up recently by the coming into force of a new provision in the Extradition Treaty between the United States and Canada which makes family-desertion (not wife-desertion) an extraditable offence.

As many deserters go to other provinces, some sort of concerted action on the part of the various provinces is necessary to deal with this very widespread evil. If dealt with firmly there is no question it can be very largely brought under control.

The Sanitary Inspectors' Association of Canada

DURING the past year an arrangement was made by which the above Association became affiliated with the Canadian Public Health Association. Whilst we retain our identity as an Association our members from the first of January became also members of the Canadian Public Health Association. We feel that this mutual arrangement should prove to be of material benefit to both Associations. On our own part we feel sure that we shall be in closer touch with the leaders in the advancement of Sanitary Science in Canada—the men of high standing in governmental and administrative circles who are the directors and leaders in Public Health work. We expect to get the benefit of their advice and experience. We are also to have the use of the Journal as our official organ. Every member in good standing will receive a copy monthly, and we intend to keep in touch with our members all over Canada by means of a page or two in the JOURNAL every month which will advise them of what work is being done in the various branches.

The Canadian Public Health Association, on the other hand, benefits by the addition to its membership of a group of men engaged in active health work all over the Dominion. We believe that any successful Heatlh Officer will cheerfully admit that unless he is provided with intelligent, well-trained Sanitary Inspectors he cannot make his work for the improvement of the health of his community effective. A Health Officer plans, advises and directs; but the ultimate success of his administration depends to a large extent on the kind of inspectors and nurses who are his subordinates. We feel that a great opportunity exists for a close co-operation on the part of Health Officers and Sanitary Inspectors. Let the former recognize the usefulness of the latter; let them insist on the appointment of properly trained and qualified inspectors; do all in their power to encourage their Sanitary Inspectors to make themselves still better informed, more proficient and useful. One of the main objects of our Association is to constantly keep before our members the importance of continuous study so as to keep abreast of all the latest developments in sanitary science. If we feel that we have the support, encouragement and recognition of our Health Officers, this will result in better team work and be of real and lasting benefit to the community.

As regards the JOURNAL, it is intended to submit for the approval of the Editor from time to time articles which will be of general interest to the readers.

Don't forget that your Annual Subscription for 1924 became due on January 1st. The amount is five dollars and as we have to send to the Canadian Public Health Association the sum of three dollars to cover your membership in that body (which includes the JOURNAL) you will see that it is important that subscriptions should be sent in promptly.

We hope that the Provincial and Local Branches are getting down to work for the winter. Winnipeg Branch meets every week on Saturdays from twelve to one o'clock. They find this a convenient time when most of the men are at the City Hall. Other Branches may prefer to have their meetings at night. But the main point is to appoint a programme committee and prepare a syllabus for the winter season—not neglecting the social side. Weekly meetings are the best, but fortnightly or monthly meetings may be preferable when it is not so easy to get together. Experience has shown that the most useful and lasting work is done in the Branch meetings.

Regina is off to a good start with some of the old-time enthusiasm. We want to hear from Calgary, Edmonton, Moose Jaw, and others. What about Saskatoon? Ottawa should get busy and maintain their prestige of the Capital City. What is the matter with Toronto? It only needs someone to make a start and Toronto should be able to show a Branch with a large membership—larger than any other in the Dominion.

Eastern Sanitary Inspectors should wake up and get together. Don't leave all the work to the West.

The Annual Convention next year is to be held at Fort William—an excellent chance for both East and West to meet. Don't believe Kipling; his remark that "never the twain shall meet" does not apply to Canada at all events.

We hope to print in next month's issue Mr. Hague's Presidential Address delivered at the Calgary Convention.

Don't forget that the Executive Council will be glad to receive papers suitable for publication in the JOURNAL.

The Provincial Board of Health of Ontario

Communicable Diseases reported for the Province for the Month of December, 1923

COMPARATIVE TABLE

Diseases	1923 Dec. Cases	1923 Dec. Deaths	1922 Dec. Cases	1922 Dec. Deaths
Cerebro-Spinal Meningitis	1	1	6	6
Chancroid	9	0	3	0
Chicken Pox	1087	0	x..	..
Diphtheria	457	24	315	10
Encephalitis Lethargica	3	2	x..	..
Gonorrhoea	169	0	179	0
German Measles	18	0	x..	..
Influenza	13	9	..	18
Measles	762	2	359	1
Mumps	306	1	x..	..
Pneumonia	..	128	..	282
Poliomyelitis	2	1	4	1
Scarlet Fever	1060	18	449	14
Septic Sore Throat	17	2	x..	..
Small-Pox	51	0	51	1
Syphilis	167	0	133	0
Tuberculosis	166	85	196	112
Typhoid	49	11	54	17
Whooping Cough	179	6	234	8
Goitre	5	3	x..	..

xNot reported in 1922.

Communicable Diseases reported for the Province by the Local Boards of Health for the Year 1923

COMPARATIVE TABLE

Diseases	1923 Cases	1923 Deaths	1922 Cases	1922 Deaths
Small-Pox	335	0	977	xxx3
Scarlet Fever	5,011	131	3,950	111
Diphtheria	2,935	244	3,529	xx341
Measles	10,843	70	8,950	40
Whooping Cough	3,205	181	1,691	90
Typhoid	1,665	212	576	127
Tuberculosis	2,150	x1,315	2,078	1,442
Infantile Paralysis	19	10	205	25
Cerebro-Spinal Meningitis	64	59	71	64
Influenza	....	874	....	....
Influenzal Pneumonia	....	207	....	375
Primary Pneumonia	....	2,959	....	2,559
Syphilis	1,699	....	2,136	....
Gonorrhoea	1,992	....	2,270	....
Chancroid	43	....	39	....

Note:

xOnly 65 per cent. reported.

xxRegistrar-General's Report will give 410.

xxxRegistrar-General's Report will give 6.

Notes on Current Literature

From the Health Information Service, Canadian Red Cross Society:

American Red Cross Report.

The report of the American International Red Cross for the year ended June 30th, 1923. Copies for distribution in Canada may be obtained through the Canadian Red Cross Society.

Posture and Health.

Habits of posture as related to health and efficiency. "The Nation's Health," October 15th, 1923, page 708.

Pasteurization of Milk.

The British Ministry of Health has recently issued a report on the pasteurization of milk. By J. M. Hamill, Medical Officer of the Ministry.

List of Health Books.

The American Public Health Association has prepared a list of 650 books on public health. Copies of this list may be obtained from this Association at 370 Seventh Avenue, New York City.

Symposium of Health Lectures.

The British Red Cross has issued a summary of seven health lectures based on their pamphlet "How to Keep Well."

International Health Board.

The International Health Board of the Rockefeller Foundation has issued a report for 1922. The sections on malaria, yellow fever and hookworm control make an interesting record of achievement.

Children's Bureau.

A review of ten year's work for children. By the United States Children's Bureau.

New Haven Health Demonstration.

A critical account of a co-operative health endeavour conducted in New Haven during the past three years. The problems met are frankly discussed and the information will be of interest to all public health workers.

Medical School Inspection.

A detailed description of medical school inspection as carried out in Rochester, N.Y. *The Journal of the American Medical Association*, November 3rd, 1923, page 1549.

Conditions Surrounding Pre-school Children.

An exhaustive study conducted by the United States Children's Bureau of 6,000 pre-school children in Gary, Indiana. The first part of the report describes general conditions affecting the welfare of the children. The second part is a dietary study by the schedule method.

Day Nurseries.

The day nursery as a child welfare agency organized as a connecting social link between the unbroken home and the foster home. *The Nation's Health*, November 15th, 1923, page 796.

The Work of Public Health Officers.

The function and proper field of activity of the public health officer. *The Journal of the American Medical Association*, November 24th, 1923, page 1735.

Cardiac Clinic.

A description of the cardiac clinic of the Reese Dispensary, Chicago, which is organized to meet the needs of patients with cardiac handicap who require prolonged supervision as well as social adjustment. *The Nation's Health*, November 15th, 1923, page 773.

Height, Weight and Undernourishment.

The authors conclude that height and weight tables offer an inaccurate guide to the selection of undernourished children. Such tables are a poor substitute for a careful physical examination by a competent physician. *American Journal of Public Health*, November, 1923, page 920.

Home Nursing Classes.

The American *Red Cross Courier* for November 24th contains a complete review of the activities of the American Red Cross in conducting classes in Home Nursing.

News Notes

The Toronto Social Hygiene Council has arranged an elaborate Social Hygiene exhibit in the St. Charles Hotel, Toronto. The exhibit consists of a large number of posters, wax models, Social Hygiene literature, books and recreational apparatus, while attractoscopes showing slides depicting various phases of Social Hygiene, moving pictures and daily lectures will be an added feature. The first period of the exhibit for women only was opened on January 21st, by His Worship the Mayor of Toronto, and introductory addresses were given by Dr. J. W. S. McCullough, Chief Officer of Health for Ontario, and Dr. C. J. O. Hastings, Medical Officer of Health for the City of Toronto. The Provincial and City Health Departments are rendering magnificent co-operation and it is expected that the exhibit will be seen by thousands of citizens.

The New York Public Library writes the Public Health Journal requesting the following numbers, which are lacking from their files: Volumes 1-11, all issues; Volume 12, Nos. 1-4 and 6-9; Indexes to Volumes 12 and 13. If any reader of the Public Health Journal has any of these numbers in his possession and would care to present them to the New York Public Library, will they please communicate with the Editor of the Public Health Journal.

The Annual Almanac issued by the Provincial Board of Health of Ontario is now ready for distribution.

The decision to hold the Annual Congress of the Canadian Public Health Association in Montreal in or around the last week in September, will be a departure from the procedure of recent years, which should appeal to many who have had to choose between attendance at the C.P.H.A. and the Canadian or Ontario Medical Association.

The resignation of Dr. B. L. Wyatt, of Grand Mere, Quebec, from the Executive Committee of the C.P.H.A., was received with much regret by his fellow members. Dr. Wyatt, who has done exceptionally interesting work in the field of Industrial Medicine with the Laurentide Pulp and Paper Co., leaves on February 1st to take up an Executive position with the Millbank Memorial Fund in New York City.

The Ottawa Social Hygiene Council is showing commendable progress. Recently, Professor J. A. Dale, of the University of Toronto, gave the first of a series of lectures on Social Hygiene to a large audience at the Chateau Laurier. Dr. J. J. Heagerty, speaking under the auspices of the Ottawa Social Hygiene Council, has recently spoken to large audiences on various phases of the Social Hygiene movement. On several occasions the crowds have been so great that hundreds have been turned away; while some of the lectures have been given to mixed audiences, generally they have been given before men and women separately. Various moving pictures secured from the American Social Hygiene Association, have added interest to Dr. Heagerty's unusual and brilliant lectures.

Classes in home nursing are being organized by the Canadian Red Cross Society. Miss Christina Davidson, of the Victorian Order of Nurses, Miss Jean MacKenzie of the Saskatchewan Department of Education and Miss Ruby Hamilton of the Provincial Board of Health of Ontario, have been appointed to organize this work.

At the annual meeting of the Vancouver Graduate Nurses' Association, held January 9, the following resolution in connection with Public Health in Vancouver, was passed:

"We, the V.G.N.A., resolve that a recommendation be sent to the chairman of the Health Committee, City Council, asking that vacancies arising in Public Health positions be filled by those having had a University Course in Public Health work, or its equivalent, and that applications for same be called for publicly."

The Public Health Journal desires to give publicity to a note with reference to an article received from Miss Malcolm, of the Bacteriological Laboratory of Vancouver General Hospital. Through a misunderstanding, an article on the same subject, The Kahn Test, by Dr. Detweiler, of Toronto, was published in the October Journal, although Miss Malcolm's article had been received before Dr. Detweiler's. Dr. R. H. Mullin, Director of Laboratories of Vancouver General Hospital, has called the attention of the Journal to this matter and the Journal desires to express its regret.

Editorial

DR. C. K. CLARKE

The Public Health Journal regrets to announce the death of Dr. C. K. Clarke, Professor of Psychiatry in the University of Toronto, and a distinguished figure in Psychiatry and Mental Hygiene.

Dr. Clarke's death will be a shock to his many friends in all Public Health fields. A more extended notice will appear next month.

Part of the Maudsley lecture recently delivered in England by Dr. Clarke appears in the current issue of the Journal.

LIFE INSURANCE AND PUBLIC HEALTH

The operations of all companies organized with the idea of making money for their shareholders have some relationship, direct or indirect, to public health. They pay salaries, dividends and wages. They manufacture commodities which in one way or another hinder or help human efficiency and happiness. Whether they succeed as business organizations or fail, dragging down with them the widow and the orphan, their relationship to man's health as well as his wealth is constant. Such relationships are more or less accidental and not calculated.

The one type of company, however, the relation of which to health is so close as to make it reasonable for the public to expect it to put forward definite efforts in the direction of conserving the health of the community about it, is the life insurance company. By its medical examination alone—revealing the presence or absence of disease or deficiency in prospective policy holders, such a company automatically performs a public service by informing many individuals of the presence of conditions which undealt with may cause death. Such a service is of as definite value as that rendered by institutions organized with the preservation of health as their primary function.

It is curious, therefore, that scarcely a life insurance company pays any attention to its policy holders after a contract is made, beyond notifying them once a year that their premiums are due. The week after it has been mailed, its recipient may develop anything from pneumonia to cancer or syphilis. He may be sorely in need of advice which withheld will definitely shorten his life and add to the yearly disbursements of the company in which he is insured. And this man multiplied by thousands of similar men, costs millions in insurance claims. Yet the companies as a general rule do little or nothing about it.

Life insurance, it is true, is a business, and its original intent is to produce cash dividends. The fact that a lowering of the community death rate makes for the financial stability of life insurance companies should then be considered.

But one feels that there is more in it than this. Life insurance may be made a profession as well as a business, and efforts in the direction of public service should be, in the very nature of things, an opportunity as well as a duty. There is no doubt that more altruism and more endeavour for the common weal is necessary if the lot of the average man is to be easier and his life longer in the future. Some day all units of society will do their part. To some, however, it is given to lead and the finger of destiny would appear to point to the life insurance companies and the men who form part of such organizations. Their first opportunity lies in more attention to existing policy holders as well as in giving all encouragement possible to general measures undertaken by any unit for the preservation of health and the prevention of disease.